

10/574199

1AP20 Rec'd PCT/PTO 31 MAR 2006  
PATENT APPLICATION

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re application of

Docket No: Q93697

Masahiro FURUYA

Appln. No.: National Stage of PCT/JP2004/018310

Confirmation No.: Unknown

Group Art Unit: Unknown

Filed: March 31, 2006

Examiner: Unknown

For: MULTIFUNCTIONAL MATERIAL HAVING CARBON-DOPED TITANIUM OXIDE  
LAYER

**INFORMATION DISCLOSURE STATEMENT**  
**UNDER 37 C.F.R. §§ 1.97 and 1.98**

**MAIL STOP AMENDMENT**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

In accordance with the duty of disclosure under 37 C.F.R. § 1.56, Applicant hereby notifies the U.S. Patent and Trademark Office of the documents which are listed on the attached PTO/SB/08 A & B (modified) form and/or listed herein and which the Examiner may deem material to patentability of the claims of the above-identified application.

One copy of each of the listed documents is submitted herewith, except for the following: U.S. patents and/or U.S. patent publications; and co-pending non-provisional U.S. applications filed after June 30, 2003.

The present Information Disclosure Statement is being filed: (1) No later than three months from the application's filing date; (2) Before the mailing date of the first Office Action on the merits (whichever is later); or (3) Before the mailing date of the first Office Action after

INFORMATION DISCLOSURE STATEMENT  
Appln. No.: National Stage of PCT/JP2004/018310  
Attorney Docket No. Q93697

filing a request for continued examination (RCE) under §1.114, and therefore, no Statement under 37 C.F.R. § 1.97(e) or fee under 37 C.F.R. § 1.17(p) is required.

In compliance with the concise explanation requirement under 37 C.F.R. § 1.98(a)(3) for foreign language documents, Applicant encloses herewith a copy of a Communication from a foreign patent office in a counterpart application citing such documents (International Search Report for PCT/JP2004/018310 dated March 22, 2005), together with an English-language version (if not already included) of at least that portion of the Communication indicating the degree of relevance found by the foreign patent office.

In compliance with the concise explanation requirement under 37 C.F.R. § 1.98(a)(3) for foreign language documents, Applicant submits the following explanations: English language abstracts, submitted herewith, constitute concise statements of relevance for JP 2001-205103, JP 2001-205094, and JP 2002-95976. Also, WO 01/10553 corresponds to U.S. 6,794,065 and WO 98/23374 corresponds to U.S. 6,306,343.

The submission of the listed documents is not intended as an admission that any such document constitutes prior art against the claims of the present application. Applicant does not waive any right to take any action that would be appropriate to antedate or otherwise remove any listed document as a competent reference against the claims of the present application.

10/5/4199

INFORMATION DISCLOSURE STATEMENT  
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The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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WASHINGTON OFFICE

**23373**

CUSTOMER NUMBER

Date: March 31, 2006

Substitute for Form 1449 A & B/PTO

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

(use as many sheets as necessary)

Complete if Known

Application Number **102874199**  
 Confirmation Number Unknown  
 Filing Date March 31, 2006  
 First Named Inventor Masahiro FURUYA  
 Art Unit Unknown  
 Examiner Name  
 Attorney Docket Number Q93697

Sheet 1 of 1

**U.S. PATENT DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Document Number		Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document
		Number	Kind Code <sup>2</sup> (if known)		
		US 6,794,065	B1	09/21/2004	TAKESHI MORIKAWA, ET AL
		US 6,306,343	B1	10/23/2001	KAZUO SUGIYAMA
		US			

**FOREIGN PATENT DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document			Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Translation <sup>6</sup>
		Country Code <sup>3</sup>	Number <sup>4</sup>	Kind Code <sup>5</sup> (if known)			
		JP	2004-167370	A	06/17/2004	JAPAN ATOM ENERGY RES. INST.	Abstract
		JP	2004-283790	A	10/14/2004	TOSHIBA CERAMICS CO. LTD.	Abstract
		JP	2005-47787	A	02/24/2005	TOSHIBA CERAMICS CO. LTD.	Abstract
		JP	2002-12962	A	01/15/2002	NIPPON STEEL CORP.	Abstract
		WO	98/23374	A1	06/04/1998	ECODEVICE LAB CO. LTD.	Abstract
		JP	9-87857	A	03/31/1997	RES. DEV. CORP. OF JAPAN	Abstract
		JP	2003-73799	A	03/12/2003	FUJI OOZX INC.	Abstract
		JP	2001-49421	A	02/20/2001	FUJI OOZX INC.	Abstract
		JP	11-43770	A	02/16/1999	TANAKA:KK	Abstract
		JP	2001-205103	A	07/31/2001	TOYOTA CENTRAL RES. & DEV. LAB INC.	Abstract
		JP	2001-205094	A	07/31/2001	TOYOTA CENTRAL RES. & DEV. LAB INC.	Abstract
		JP	2002-95976	A	04/02/2002	TOYOTA CENTRAL RES. & DEV. LAB INC.	Abstract
		WO	01/10553	A1	02/15/2001	TOYODA CHUO KENKYUSHO KK (JP); MORIKAWA TAKESHI (JP); ASAHI RYOJI (JP); OHWAKI TAKESHI (JP); and TAGA YASUNORI (JP)	Abstract

**NON PATENT LITERATURE DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city, and/or country where published.	Translation <sup>6</sup>
		AKIRA FUJISHIMA, ET AL, "HYDROGEN PRODUCTION UNDER SUNLIGHT WITH AN ELECTROCHEMICAL PHOTOCCELL", J. ELECTROCHEM. SOC., Vol. 122, No. 11, November 1975, pages 1487-1489	
		R. ASAH, ET AL, "VISIBLE-LIGHT PHOTOCATALYSIS IN NITROGEN-DOPED TITANIUM OXIDES", SCIENCE, Vol. 293, July 13, 2001, pages 269-271	
		SHAHED U. M. KHAN, ET AL, "EFFICIENT PHOTOCHEMICAL WATER SPLITTING BY A CHEMICALLY MODIFIED n-TiO <sub>2</sub> ", SCIENCE Vol. 297, September 27, 2002, pages 2243-2245	

Examiner Signature

Date Considered

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup>Applicant's unique citation designation number (optional). <sup>2</sup>See Kind Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov), MPEP 901.04 or in the comment box of this document. <sup>3</sup>Enter Office that issued the document, by the two-letter code (WIPO Standard ST. 3). <sup>4</sup>For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup>Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup>Applicant is to indicate here if English language Translation is attached.